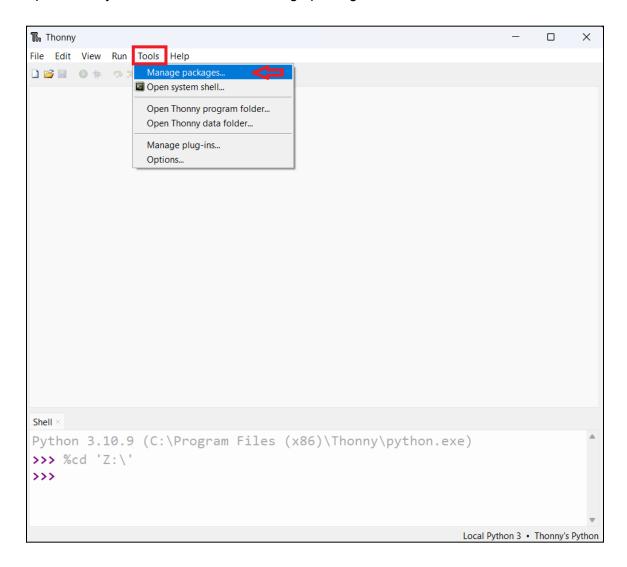
Steps to convert Image file to raw image for Display

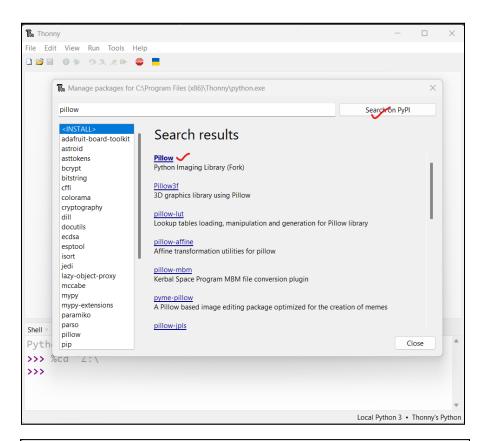
Step 1: Install Package from Thonny IDE

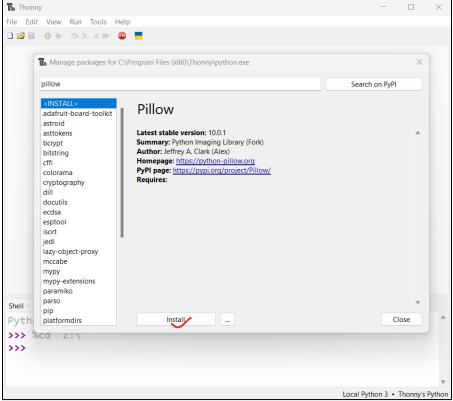
We need a **Pillow** package for converting image files like png, jpg, etc. into raw 565 image format.

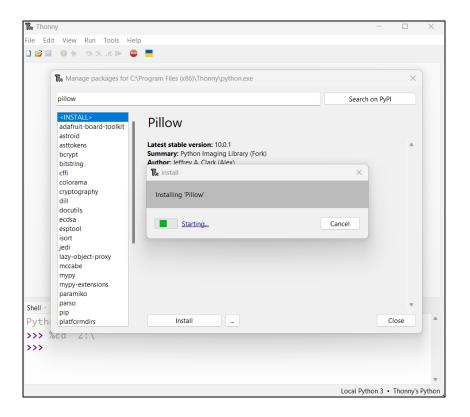
Open Thonny IDE, click on Tools > Manage packages..



In the search box type pillow and click on the search button. You should see Pillow, click and install it.

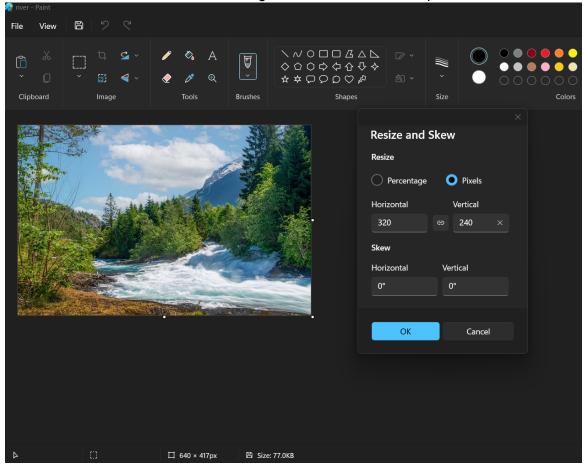






Once done then close, so now we are done installing packages.

Step 2: Resize image resolution to match your screen resolution using a suitable tool of your choice. Here we are interested in having a resolution of 320x240 pixels.



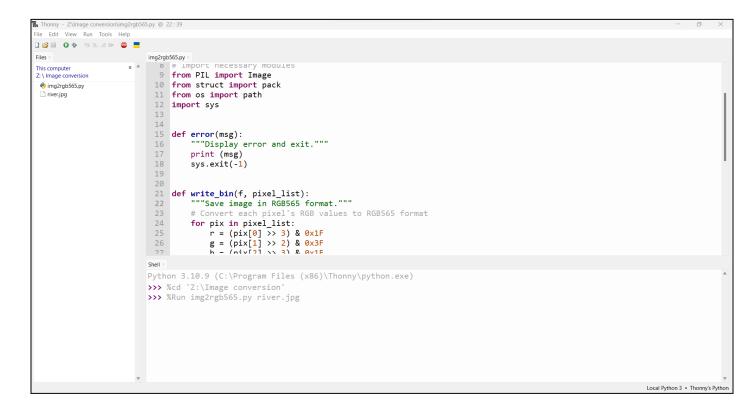
Step 3: Download img2rgb565.py code file from GitHub

Link: https://github.com/sbcshop/PiCoder-Software/blob/main/examples/img2rgb565.py

Create one folder, then copy code img2rgb565.py and your sample image. Maintain image and code in same folder as shown below,



Step 4: Run code for conversion process Type following command in terminal, checkout image for reference. *%Run img2rgb565.py imgfilename*



```
Thonny - Z:\Image conversion\img2rgb565.py @ 22:39
File Edit View Run Tools Help
img2rgb565.py
Files ×
                            8 # Import necessary modules
                     = △
This computer
                            9 from PIL import Image
Z: \ Image conversion
                            10 from struct import pack
 e img2rgb565.py
 river.jpg
                            11 from os import path
 river.raw
                            12 import sys
                           13
                            14
                            15 def error(msg):
                                    """Display error and exit."""
                            16
                            17
                                    print (msg)
                            18
                                    sys.exit(-1)
                            19
                            20
                            21 def write_bin(f, pixel_list):
                                    """Save image in RGB565 format."""
                            22
                                    # Convert each pixel's RGB values to RGB565 format
                            23
                            24
                                    for pix in pixel_list:
                            25
                                        r = (pix[0] >> 3) & 0x1F
                                        g = (pix[1] >> 2) \& 0x3F
                            26
                                        h - (niv[2] >> 3) & av1F
                          27
                          Shell >
                          >>> %Run img2rgb565.py river.jpg
                           Saved: river.raw
```

Step 5: Transfer file to Raspberry Pi Pico

```
The Thonny - Z:\Image conversion\img2rgb565.py @ 22:39
 File Edit View Run Tools Help
Files ×
                               img2rgb565.py
                                        Import necessary modules
 This computer
                                9 from PIL import Image
 Z: \ Image conversion
                                 10 from struct import pack
  🎨 img2rgb565.py
                                 11 from os import path
 river
                                 12 import sys
          Open in Thonny
          Configure .raw files...
                                 15 def error(msg):
16 """Display error and exit."""
17 print (msg)
                                 18
                                          sys.exit(-1)
          New directory...
                                 19
          Сору
                                 21 def write_bin(f, pixel_list):
                                            ""Save image in RGB565 format."""
          Move to Trash
                                          # Convert each pixel's RGB values to RGB565 format
          Properties
                                          for pix in pixel_list:
                                              r = (pix[0] >> 3) & 0x1F
g = (pix[1] >> 2) & 0x3F
h - (pix[2] >> 3) & 0x1F
 Raspberry Pi Pico
                               26
27
  nicoder.pv
                               MicroPython v1.19.1-18-g6e868d47d-dirty on 2022-06-17; Raspberry Pi Pico with RP2040
                               Type "help()" for more information.
                               >>>
                                                                                                                                                                MicroPython (Raspberry Pi Pico) • COM45
```

Done now, you can use image display code to display this raw image on LCD.